

United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report

Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

NEIC Status Meeting

Activity Date:

April 6, 2010

Reporting Official and Date:

██████████ SA

27-APR-2010, Signed by: ██████████ SA

Approving Official and Date:

██████████ SAC

29-APR-2010, Approved by: ██████████, SAC

SYNOPSIS

04/06/2010 - On April 6, 2010, S/A ██████████ EPA CID met with NEIC Chemist ██████████ and others to discuss the status of the Radium 266 and Radium 228 data review in the Energy Laboratories, Inc. Casper, WY lab fraud investigation.

DETAILS

On April 6, 2010, Chemist ██████████ provided S/A ██████████ with a compact disc containing the electronic spreadsheet ██████████ produced to assess if ELI Casper was able to meet the regulatory detection limit and to identify those instances where the ELI Casper appeared to have failed to meet the required sensitivity level as required by EPA methods. The CD is attached to this report and will be filed in the Denver Area Office case file.

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**United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report**

Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Case Status Meeting With AUSA Jim Anderson

Activity Date:

April 9, 2010

Reporting Official and Date:

██████████ SA
29-APR-2010, Signed by: ██████████ SA

Approving Official and Date:

██████████, SAC
29-APR-2010, Approved by: ██████████ SAC

SYNOPSIS

04/09/2010 - On April 9, 2010, S/A ██████████ EPA CID, met with Assistant U.S. Attorney Jim Anderson to discuss the status of the Energy Laboratories, Inc. investigation.

DETAILS

On April 9, 2010, S/A ██████████ EPA CID, met with Assistant U.S. Attorney Jim Anderson to discuss the status of the Energy Laboratories, Inc. investigation. S/A ██████████ briefed AUSA Anderson on recent investigative steps taken.

AUSA Anderson briefed S/A ██████████ on the nature of the meeting ██████████ had with ELI defense counsels, ██████████ in December 2009. AUSA Anderson was unable to locate the documents that were provided to ██████████ by defense counsel during the December meeting. AUSA Anderson advised he would contact S/A ██████████ upon locating the documents.

AUSA Anderson expressed an interest in reaching out to the Department of Justice, Environmental Crimes Section (ECS), to request an experienced environmental crimes attorney be assigned to assist ██████████ with the investigation.

S/A ██████████ and AUSA Anderson agreed to meet in a couple of months, preferably with the ECS attorney.

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United States Environmental Protection Agency
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Case Number
0800-0497

Case Title:
Energy Laboratories, Inc.

Reporting Office:
Denver, CO, Area Office

Subject of Report:
Interview of [REDACTED] EPA R8 DW

Activity Date:
October 26, 2009

Copies to:

Related Files:

Reporting Official and Date:
[REDACTED] SA
03-NOV-2009, Signed by: [REDACTED] SA

Approving Official and Date:
[REDACTED], SAC
10-NOV-2009, Approved by: [REDACTED], SAC

SYNOPSIS

On October 15, 2009, S/A [REDACTED] EPA CID, telephoned [REDACTED] EPA Region 8, Drinking Water Program (DWP) to schedule a meeting to discuss Energy Laboratories, Inc. (ELI). When asked when could meet, [REDACTED] responded, "I didn't know there was anything to catch up on." [REDACTED] agreed to meet with S/A [REDACTED] at EPA CID at 2:00 pm later that day.

DETAILS

On October 15, 2009, S/A [REDACTED] EPA CID, telephoned [REDACTED] EPA Region 8, Drinking Water Program (DWP) to schedule a meeting to discuss Energy Laboratories, Inc. (ELI). When asked when could meet, [REDACTED] responded, "I didn't know there was anything to catch up on." [REDACTED] agreed to meet with S/A [REDACTED] at EPA CID at 2:00 pm later that day.

On October 15, 2009, at 2:00 pm, S/As [REDACTED] and [REDACTED] interviewed [REDACTED] regarding [REDACTED] knowledge of any recent conversations between EPA supervisory personnel and [REDACTED] and Sheryl Garling, former managers at Energy Laboratories, Inc., Casper, Wyoming.

[REDACTED] advised [REDACTED] is no longer the Lab Certification Coordinator for EPA R8 and is currently working for [REDACTED] Supervisor of EPA R8's DWP. [REDACTED] was asked when the most recent radiochemistry (RAD) lab certification audit was conducted by EPA R8 at ELI.

[REDACTED] replied the last RAD audit occurred in summer 2008. [REDACTED] stated lab certification audits occur every three years.

S/A [REDACTED] asked [REDACTED] if [REDACTED] has had any conversations with [REDACTED] and Sheryl Garling regarding the status of EPA CID's criminal case or the outcome of the audit. [REDACTED] replied [REDACTED] has not.

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S/A [REDACTED] advised [REDACTED] she received a copy of a letter written by [REDACTED], defense counsel for [REDACTED] and Sheryl Garling. SA [REDACTED] further advised in the letter [REDACTED] claimed that the Garlings had an unofficial business meeting with an EPA supervisor who told them that ELI's criminal investigation had been "shelved." SA [REDACTED] explained she needed to find out from whom, if anyone, at EPA had spoken with the Garlings. S/A [REDACTED] inquired if [REDACTED] knew which supervisor met with the Garlings and might have discussed CID's investigation or EPA's audit results. [REDACTED] replied [REDACTED] knew who had spoken to the Garlings.

[REDACTED] explained that throughout the year EPA Region 8 participates in various water utilities conferences. [REDACTED] recalled [REDACTED] and Sheryl Garling were present at a recent conference held in Laramie, Wyoming. [REDACTED] stated the conference was organized by the WARWS organization, but could not recall what the acronym stood for.

[REDACTED] advised there was a "mixer" (a reception) on the last day of the conference for the attendees. [REDACTED] stated [REDACTED] and Sheryl Garling were present at the "mixer" as was [REDACTED], himself and a few other EPA employees. (Interviewer's note: [REDACTED] is an EPA employee who works for [REDACTED] in the DWP). According to [REDACTED] while at the "mixer," [REDACTED] and the Garlings decided to go to a restaurant in South Laramie for a business dinner. [REDACTED] advised those in attendance at the business dinner were [REDACTED] and Sheryl Garing, [REDACTED] and [REDACTED], a former ELI employee.

S/A [REDACTED] asked [REDACTED] if at any time [REDACTED] learned what discussions took place during the business dinner. [REDACTED] stated he only recalled they ([REDACTED] and [REDACTED]) discussed the restaurant where they had dinner and the fact the restaurant was still on well water. [REDACTED] stated the Garlings are trying to develop a consulting business and believed that might have been discussed at dinner. [REDACTED] stated he did not know if the CID investigation or the results of EPA R8's audit were discussed.

On October 26, 2009, S/A [REDACTED] contacted [REDACTED] to request detailed information regarding the water utilities conference and the restaurant where the business dinner occurred between the Garlings and [REDACTED]

[REDACTED] advised the conference was held in September 2009 and was

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given by Wyoming Association of Rural Water Systems (WARWS).

██████████ advised that █████ and others from EPA R8 drove up to Laramie, Wyoming on September 15th and set up the EPA exposition booth around lunch time on the 15th. █████ and other EPA employees were at the conference on the 16th, took down the booth on the 17th, and returned to Denver that same day. █████ believed the dinner attended by ██████████ and the Garlings occurred on the 16th at the Calvaryman's Inn located in the south end of Laramie, Wyoming.

██████████ subsequently forwarded an e-mail exchange dated August 11 and 13, 2009 between ██████████, EPA Team Leader, DWP and ██████████ from the Wyoming Rural Water Association. The emails contain information about the training exposition, a list of EPA R8 employee attendees and scheduled presentations. See attached copy of e-mail.

ATTACHMENT

██████████ e-mail dated 10/26/2009

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**United States Environmental Protection Agency
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Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Case Status 4/12/2010 to 7/2/2010

Activity Date:

July 2, 2010

Reporting Official and Date:

██████████, SA

15-JUL-2010, Signed by: ██████████, SA

Approving Official and Date:

██████████, SAC

15-JUL-2010, Approved by: ██████████, SAC

SYNOPSIS

07/02/2010 - This report serves to provide a case status from April 12, 2010 through July 2, 2010. Due to new leads, other case demands and extensive travel, limited investigative work was accomplished on this case during this reporting period.

DETAILS

During this reporting period S/A ██████████, EPA CID, conducted a cursory review of information contained in the compact disc (CD) received from National Enforcement Investigations Center (NEIC) Chemist ██████████ on April 9, 2010. The CD consists of an electronic spreadsheet produced by Chemist ██████████. The spreadsheet was created to assess if ELI Casper was able to meet the regulatory detection limit and to identify those instances where the ELI Casper appeared to have failed to meet the required sensitivity level as required by EPA methods.

Also during this reporting period, S/A ██████████ communicated with ██████████, Assistant Special Agent-In-Charge of the National Computer Forensic Laboratory (NCFL) to inquire about the status of the "native" file conversion of data seized during the search warrant of October 2007. On May 19, 2010, S/A ██████████ received an e-mail from S/A ██████████ advising that the digital evidence in the ELI investigation was still being processed through E-Capture software. S/A ██████████ explained that because of the large amount of data being processed (converted to optical character reader/OCR format and indexed) it was taking some time to complete.

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United States Environmental Protection Agency
Criminal Investigation Division
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Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Electronic Data Review

Activity Date:

September 2, 2010

Reporting Official and Date:

██████████, SA

10-SEP-2010, Signed by: ██████████, SA

Approving Official and Date:

██████████, SAC

10-SEP-2010, Approved by: ██████████, SAC

SYNOPSIS

09/02/2010 - On September 2, 2010, S/A ██████████ imported approximately 55 gigabytes of electronic data into the I-Pro software and commenced electronic data review.

DETAILS

On July 2, 2010, S/A ██████████ received a 55 gigabyte ATA hard drive from EPA CID's National Computer Forensic Laboratory (NCFL). The hard drive consisted of electronic data seized from Energy Laboratories, Inc., Casper, Wyoming main and radiochemistry laboratory sites on October 30, 2007. The data contained in the hard drive is limited to the keywords search list provided by S/A ██████████ to NCFL.

S/A ██████████ made a few attempts to import the data with the assistance of the I-Pro Technical staff and on September 2, 2010, the data was successfully imported. The electronic data review process has been initiated.

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**United States Environmental Protection Agency
Criminal Investigation Division
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Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Receipt of ELI Casper's Lead 210 Data from NEIC

Activity Date:

October 5, 2010

Reporting Official and Date:

██████████, SA

06-OCT-2010, Signed by: ██████████, SA

Approving Official and Date:

██████████, SAC

06-OCT-2010, Approved by: ██████████, SAC

SYNOPSIS

10/05/2010 - On October 5, 2010, S/A ██████████, EPA CID, received an Interoffice Memorandum from ██████████, Criminal Program Coordinator, National Enforcement Investigations Center (NEIC) and a compact disk (CD) containing lead 210 data extracted from Energy Laboratories, Inc.'s (ELI), electronic database.

DETAILS

The electronic data was seized during the execution of a federal search warrant in late 2007 in Casper, Wyoming. The CD contains three Microsoft Excel files containing ELI Casper's lead 210 data. The three Excel files contained in the CD are titled as follows:

1. qselpbBatches.xls
2. qselpbBatchSampleCounts.xls
3. qselpbBatchSamples.xls

A copy of said memorandum is attached to this report. The CD is filed in the Denver Area Office case file.

ATTACHMENT

NEIC's Lead 210 Memo and CD, 9/30/2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF CRIMINAL ENFORCEMENT, FORENSICS AND TRAINING
NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
P.O. BOX 25227, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

September 30, 2010

MEMORANDUM

Subject: Transmittal of Lead 210 data
Energy Laboratories, Inc.
NEIC Project RP1210
CID Case No. 0800-0497

From: [REDACTED]
NEIC Criminal Program Coordinator

To: [REDACTED] Special Agent in Charge
Criminal Investigation Division
Denver Area Office

As requested, [REDACTED] has conducted a search of the electronic database for lead 210 Energy labs data. The lead 210 data was extracted from the database and copied to some spreadsheets. Attached is one CD which contains the following MS Excel files:

qselpbBatches.xls (Batches table, BatchID field contains "pb")
qselpbBatchSampleCounts.xls (Batch Sample Counts table, Analyte field contains "lead")
qselpbBatchSamples.xls (Batch Samples table, BatchID field contains "pb")

Please free to contact me or [REDACTED] the NEIC Project Manager, if you have any questions.

Attachment: a/s

Cc: [REDACTED], Special Agent, CID R8 (w/o CD)
[REDACTED] EPA NEIC Project Manager (w/oCD)
[REDACTED], EPA NEIC (w/oCD)



United States Environmental Protection Agency
Criminal Investigation Division
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Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Communications With [REDACTED] EPA Region 8 Drinking Water Program

Activity Date:

September 28, 2010

Reporting Official and Date:

[REDACTED] SA
21-OCT-2010, Signed by: [REDACTED] SA

Approving Official and Date:

[REDACTED], SAC
01-NOV-2010, Approved by: [REDACTED], SAC

SYNOPSIS

09/28/2010 - Between September 27th and 28th, 2010, S/A [REDACTED] EPA CID, communicated with [REDACTED] EPA Region 8 Drinking Water Compliance program regarding regulatory requirements for Lead 210, Radium 226 and 228 in drinking water.

DETAILS

On September 27, 2010, S/A [REDACTED] EPA CID, [REDACTED], Environmental Scientist, EPA Region 8, [REDACTED], Regional Criminal Enforcement Counsel (RCEC) and [REDACTED], S/A EPA CID met with [REDACTED] EPA Region 8 Drinking Water Compliance at the EPA CID office. The purpose of the meeting was to discuss the Lead 210, Radium 226 and Radium 228 requirements for compliance under the Safe Drinking Water Act.

[REDACTED] advised [REDACTED] works for EPA Region 8's Drinking Water Compliance Program and is responsible for the states of Wyoming and Utah. [REDACTED] is responsible for overseeing compliance with the Lead/Copper and the Radiological rules. Additionally, [REDACTED] recently assumed responsibility for overseeing compliance with the Total Coliform Rule.

[REDACTED] explained EPA Region 8 has taken a "hands off" approach with the regulated community that is required to comply with the Safe Drinking Water Act (SDWA) regarding treatment options. If the regulated entity is out of compliance, they can request assistance from the EPA to determine required changes to come back into compliance. Otherwise, EPA allows for the regulated community to determine how best to come into compliance.

[REDACTED] was questioned regarding the significance, if any, of a certified laboratory failing to meet its detection limit. [REDACTED] replied, "It is very important." [REDACTED] went on to say that if the sensitivity levels were not met when performing an analysis then the results of that analysis would be unreliable. Furthermore, [REDACTED] stated that if a laboratory is certified then "why didn't it meet its sensitivity level?" [REDACTED] believes that a laboratory's failure to meet its sensitivity levels for the analysis should be a red flag in the certification process.

[REDACTED] advised that the regulated community has to abide by the 5pCi MCL (maximum contaminant level). [REDACTED] explained that for the regulated community, the following three results cannot exceed 5pCi: Radium 226, Radium 228 and Radium 226 & 228 combined. [REDACTED] indicated the MCL for gross alpha is 15pCi. [REDACTED] stated the Region 8 program relies on the reported value to indicate whether or not a facility is in compliance.

S/A [REDACTED] asked if Lead 210 is an analysis that is required under the Safe Drinking Water Act for

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regulatory purposes. [REDACTED] replied that the region usually requires a check for Uranium. Lead 210 and other Beta emitters are usually only specified if the regulated entity might have an issue with infiltration, for example if they were located downstream from a nuclear facility.

On September 28, 2010, [REDACTED] sent S/A [REDACTED] an e-mail providing additional information and/or clarification on the information discussed during the September 27th meeting. A copy of said e-mail is attached to this report.

ATTACHMENT

Email From EPA [REDACTED] dated 9/28/2010

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Radionuclides follow-up from Monday 9/26/10...

to: [REDACTED]

09/28/2010 02:37 PM

Good afternoon [REDACTED], I hope I captured the answers you needed from our discussion yesterday:

141.26(a)(2) discusses initial monitoring requirements, however a more detailed discussion for reduced monitoring (as what I described in our meeting) would be 141.26(a)(3). This describes the future monitoring period dependent on what the results of your samples from the initial monitoring period. Systems had to take 4 consecutive quarterly samples (only 2 quarters were required if they were below the detection limit), then they were moved into new sample periods.

In the Federal Register for the Rads Revision final rule (dated December 7, 2000), I also saw that Pb-210 monitoring is required under the Unregulated Contaminant Rule (UCMR). I have never managed that specifically, so I would have to consult with another rule manager for more detail.

From everything I could find, it appears that I misspoke about the detection limits changing from the original rule to the revision. It seems that the detection limit for alpha, Ra-226 and Ra-228 remained the same since the original rule went into effect. The detection limit for uranium was established in the revision as it had not been previously regulated.

In all the regulatory language, it only states that systems need to monitor for "uranium" not a particular isotope of uranium. This is why I have always a total or combined uranium result.

I hope that covers everything. Please feel free to let me know if there's anything else I can provide.

[REDACTED]
US EPA Region 8 Drinking Water Program
1595 Wynkoop St.
Denver, CO 80202-1129
Ph: 303-312-6034
Fax: 303-312-6131
[REDACTED]@epa.gov

United States Environmental Protection Agency
Criminal Investigation Division
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Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Case Status Report 10/6/2010 to 12/23/2010

Activity Date:

December 23, 2010

Reporting Official and Date:

██████████, SA

31-DEC-2010, Signed by: ██████████ SA

Approving Official and Date:

██████████ SAC

03-JAN-2011, Approved by: ██████████, ASAC

SYNOPSIS

12/23/2010 - Between October 6, 2010, to December 23, 2010, S/A ██████████ EPA CID, coordinated and worked with EPA's National Computer Forensic Laboratory (NCFL) and the experts at EPA's National Air and Radiation Laboratory (NAREL) for their assistance in the Energy Laboratory, Inc. (ELI) investigation. Assistance was requested with obtaining data in functional formats for analysis and analysis of the data by the NAREL experts.

DETAILS

On September 27, 2010, S/A ██████████ through Special Agent-In-Charge ██████████, requested the assistance of the radiochemistry experts from EPA NAREL with the ELI investigation. A copy of said letter is attached.

On October 1, 2010, S/A ██████████ telephonically spoke with ██████████ EPA NAREL. A discussion was held regarding the allegations that ELI personnel changed result values of radiochemistry analysis performed under the direction of ██████████, ELI lab director. ██████████ stated there is no justifiable reason why anyone would change numbers. ██████████ further stated, "There is never a legitimate reason to change a number." ██████████ explained that if an error was discovered in the analysis process, the proper way to proceed is to reanalyze the sample. Both the original result and the result from reanalysis would be reported to the client. ██████████ stated that the fact ELI was shredding documents raises a red flag. ██████████ agreed to assist S/A ██████████ with the ELI investigation by providing experts to analyze the data in question.

On October 7, 2010, S/A ██████████ through SAC ██████████ formally requested the assistance of the U.S. EPA NAREL and provided copies of some documents believed might be helpful as background information and introduction to the investigation. A copy of said letter and the summary list of documents provided to NAREL is attached to this report.

On October 21, 2010, S/A ██████████ held a conference call on the ELI investigation. Present on the conference call were: ██████████, Environmental Scientist with EPA Region 8, Regional Enforcement Counsel ██████████ and ██████████ and ██████████ from EPA's NAREL laboratory. During the call the NAREL representatives advised that without paper documents (ELI shredded most documents during the time period covered by the investigation) it will be difficult to analyze and identify questionable data because the raw data, bench sheets and final reports are all important documents/data to review. S/A ██████████ advised that the final reports that were reported to the clients are documents which can be retrieved through ELI's Paper Vision System. The NAREL experts requested an inventory of the data that was seized from the hard drives from ELI's radiochemistry laboratory. S/A ██████████ advised that an inventory was never

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provided by NCFL but [REDACTED] would attempt to obtain an inventory of data seized.

On October 21, 2010, S/A [REDACTED] spoke to [REDACTED] EPA CID NCFL regarding the computers seized at the RAD lab during the ELI search warrant. S/A [REDACTED] was not at his office but advised [REDACTED] recalled all instruments and computers at the RAD lab that could be imaged, were imaged. [REDACTED] stated S/A [REDACTED] NCFL, had oversight at the RAD lab during the search warrant.

On October 29, 2010, S/A [REDACTED] received an email from former EPA S/A [REDACTED] currently an agent with the U.S. Fish and Wildlife Service, recapping a request S/A [REDACTED] made via a telephone conversation of computer data needed for the investigation and provided a copy of NCFL's Report of Acquisition dated January 9, 2008, wherein all computers that were forensically imaged for both the main and RAD lab ELI sites were listed. A copy of said email is attached.

On November 4-5, 2010, [REDACTED] EPA NAREL, reviewed ELI search warrant documentation from the RAD lab at the EPA CID office.

On November 8, 2010, S/A [REDACTED] received an email from [REDACTED] which included his notes from the brief evidence review [REDACTED] conducted of ELI documents at the EPA CID office days earlier. A copy of said email and notes are attached to this report.

On November 22, 2010, S/A [REDACTED] email Assistant Special Agent-In-Charge [REDACTED] NCFL, requesting additional information needed for the data analysis as requested by [REDACTED] the NAREL expert. A copy of said email is attached to this report.

On December 8, 2010, S/A [REDACTED] received an email from S/A [REDACTED] advising [REDACTED] had shipped a hard drive to S/A [REDACTED] containing files he believed were responsive to my request. A copy of the email is attached to this report.

On December 22, 2010, S/A [REDACTED] had a brief conference call with [REDACTED] and [REDACTED] both from EPA's NAREL laboratory. S/A [REDACTED] discussed the data [REDACTED] received from S/A [REDACTED] and advised the hard drive containing the data was being shipped to the NAREL on December 22, 2010. S/A [REDACTED] requested [REDACTED] and [REDACTED] contact S/A [REDACTED] once they receive the hard drive and after they have had an opportunity to view its contents. S/A [REDACTED] also requested to be advised what other information or documentation, if any, is required by NAREL for the data analysis to be completed.

On December 23, 2010, S/A [REDACTED] received confirmation that the hard drive had been received by [REDACTED] at the NAREL lab. S/A [REDACTED] also received an email from [REDACTED] advising he had received the hard drive and confirmed the "MDB" extension files on the hard drive include the raw data [REDACTED] needed from the Gamma Products instruments. However, the "SDT", "BDT" and "FDT" file extension files are binary which requires information from the instrument manufacturer in order for [REDACTED] to be able to read and analyze the data. [REDACTED] advised [REDACTED] will be contacting the manufacturers to obtain the information he needs to read the data. A copy of said email is attached.

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0800-0497

ATTACHMENT

1. Initial Request for EPA NAREL Assistance, 9/27/2010
2. Official Follow-up Request for EPA NAREL Assistance, 10/7/2010
3. Email From S/A [REDACTED] 10/29/2010
4. Email from [REDACTED] EPA NAREL, 11/8/2010
5. Email Request For Information From NCFL, 11/22/2010
6. Email from S/A [REDACTED] Regarding Hard Drive Shipped, 12/8/2010
7. Email From [REDACTED] NAREL, Regarding Data, 12/23/2010

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United States Environmental Protection Agency
Criminal Investigation Division

Denver Area Office
1595 Wynkoop Street
8-CID
Denver, CO 80202



September 27, 2010

[REDACTED], Branch Chief
U.S. EPA National Air and Radiation Environmental Laboratory
540 South Morris Avenue
Montgomery, AL 36115-2601
[REDACTED] Voice

RE: Request for Assistance
EPA CID Case No. 0800-0497

Dear [REDACTED],

This letter is to request the U.S. EPA National Air and Radiation Laboratory's assistance in a criminal investigation involving Energy Laboratories, Inc., Casper, Wyoming. The investigation involves the alleged falsification and/or manipulation of data in drinking water samples containing radioactive isotopes.

EPA CID needs the assistance of an expert in the field of radiochemistry to review and interpret data to determine whether the allegations of falsification and/or manipulation of data is supported by the documentation gathered to date.

Please contact Special Agent [REDACTED], at [REDACTED] with any questions or further clarification of this request.

Sincerely,

[REDACTED]
[REDACTED]
[REDACTED]
Special Agent-In-Charge
Denver Area Office

cc: [REDACTED], Chief
Technical Support Center
U.S. EPA



United States Environmental Protection Agency
Criminal Investigation Division

*Denver Area Office
1595 Wynkoop Street
8-CID
Denver, CO 80202*



October 7, 2010

██████████, Branch Chief
U.S. EPA National Air and Radiation Environmental Laboratory
540 South Morris Avenue
Montgomery, AL 36115-2601
██████████ Voice

RE: Request for Assistance
EPA CID Case No. 0800-0497

Dear ██████████,

This letter serves as a follow-up to the original request for assistance by the U.S. EPA National Air and Radiation Laboratory in a criminal investigation involving Energy Laboratories, Inc., Casper, Wyoming (dated 9/27/10). As previously stated, the investigation involves the alleged falsification and/or manipulation of data in drinking water samples containing radioactive isotopes.

As you discussed with Special Agent ██████████, enclosed are two compact disks (CD) containing electronic data seized from ELI Casper and documents we believe may assist during the review of the electronic data. Said data and documents were seized during the execution of a federal criminal search warrant in late 2007. Attached is a summary of the documents being provided.

Please contact Special Agent [REDACTED], at [REDACTED] with any questions or further clarification of this request.

Sincerely,

[REDACTED]
[REDACTED]
[REDACTED],
Special Agent-In-Charge
Denver Area Office

cc: [REDACTED], Chief
Technical Support Center
U.S. EPA

Attachments: 1) CD – Radium 226 & 228 data
2) CD – Lead 210 data
3) ELI SOP: Gross Alpha & Gross Beta Radioactivity in Drinking Water
4) ELI SOP: Radium 228 in Drinking Water
5) ELI SOP: Alpha-Emitting Radium Isotopes in Drinking Water
6) Miscellaneous ELI documents, re: Radium 226 & 228, Lead 210
7) Summary of witness statements

Attachments Summary

- 1) CD - Radium 226 & 228 data. The following Microsoft Excel spreadsheets are contained in the CD:

Ra226DW+PWSbyVolume.xls
Ra228DW+PWSbyVolume.xls
qselNEIC226Reports2.xls
qselNEIC228Reports2.xls

NOTE: Both spreadsheets named "qselNEIC..." were generated by NEIC as an initial preliminary review of the electronic data. A review of the NEIC calculations for accuracy is appreciated. However, we request that the NAREL conduct its own analysis independent of the analysis completed by NEIC.

- 2) CD - Lead 210 data. The following Microsoft Excel spreadsheets are contained in the CD:

qselpbBatches.xls
qselpbBatchSampleCounts.xls
qselpbBatchSamples.xls

- 3) ELI SOP: Gross Alpha & Gross Beta Radioactivity in Drinking water
- 4) ELI SOP: Radium 228 in Drinking Water
- 5) ELI SOP: Alpha-Emitting Radium Isotopes in Drinking Water
- 6) Miscellaneous ELI documents, re: Radium 226 & 228, Lead 210
 - a) "QA'ING SETS" (RAD, Box 1, #17)
 - b) "Memorandum" (RAD Box 1, #53)
 - c) "Pb-210" (RAD Box 3, #94)
 - d) "Procedure to Analyze Ra226, Ra228, and Pb210" (RAD Box 3, #94)

NOTE: All documents listed above were seized during the execution of a federal criminal search warrant at ELI Casper in late October 2007. Any hand-written notes on the documents were notes made by unknown individuals at ELI Casper.

- 7) Allegations Summary: Witness Statements – Key Points

This document contains key points from statements made by witnesses during the investigation. These witnesses are either current or former ELI employees.

Please contact S/A [REDACTED], EPA CID at [REDACTED] with any questions.

ELI Info

[REDACTED]

to:

[REDACTED]

10/29/2010 04:25 PM

Cc:

[REDACTED]

Show Details

[REDACTED], as I understood the email you sent [REDACTED] and the phone conversation we had last week, you:

- 1) wanted a complete list of computers which had been imaged during the search warrant,
- 2) wanted to know where each image was taken,
- 3) wanted to know which imaged computers were assigned to which personnel and,
- 4) wanted to know if any lab instruments were imaged.

The Report of Acquisition dated 1/9/2008 is attached. It contains much of the information you wanted. It is a complete list of all imaged computers, to include the location where they were found and who, if known, was assigned to the computer. It also documents the known use of the computer, if that information was available/obtained. Remember, ELI personnel were not always available to answer questions in every area where a computer was imaged and, as I recall, the Rad lab was mostly shut down and vacant shortly after the service of the warrant.

I've researched the case notes and was able to retrieve a little more data and have annotated the attached copy of the Report of Acquisition to reflect that information.

Also, duplicate copies of all images were sent to NEIC for analysis, as indicated on page 8 of the report.

None of the case notes indicate any instruments, per se, were imaged.

[REDACTED]



US EPA CID
National Computer Forensics Laboratory
Report of Acquisition

Case Title / Number: Energy Labs Inc. / 0800-0497 / Lab F08-08

Date: January 9th, 2008

To: [REDACTED], Computer Specialist, Information Technology Branch, NEIC, Denver, CO

From: SA [REDACTED], NCFL

Subject: Transfer of Forensic Images For Analysis of Lab Data

Supervisor Approval: ASAC [REDACTED], NCFL [REDACTED]

Details: On October 30th, 2007 the National Computer Forensics Lab (NCFL) and the National Enforcement Investigations Center (NEIC), Information Technology Branch, assisted SA [REDACTED], Denver Area Office, in the execution of a search warrant and the seizure of electronic media at Energy Labs Inc., Casper, WY. During the warrant thirty-seven computers were forensically imaged or logically copied. SA [REDACTED] has requested that this seized media be examined for information relevant to [REDACTED] ongoing investigation of Energy Labs Inc.

Authorization For Analysis: SA [REDACTED] has a search warrant for Energy Labs Inc. which provides the requisite authorization to conduct an analysis on all seized media.

Receipt of Evidence: On October 30th, 2007 the computers identified below were forensically imaged or logically acquired from Site #1 and Site #2 at Energy Labs Inc.

Site #1

System #1	Logical Volume of <u>Organics Server</u>
Primary Known User or Purpose:	<u>Lab Personnel</u>
Location Found:	<u>Server Room Second floor Site #1</u>
Make and Model:	Generic SCSI Server
System Serial No.:	N/A
Forensic Image Description	Logical acquisition of organics server files

System #2	<u>Room A Sample Login PC4</u>
Primary Known User or Purpose:	<u>ELI Sample Login Personnel</u>
Location Found:	<u>Room A Site #1</u>
Make and Model:	Dell Optiplex GX620
System Serial No.:	F3CRY81
Forensic Image Description	Physical image of hard drive

System #3	<u>Room A Sample Login PC5</u>
Primary Known User or Purpose:	<u>ELI Sample Login Personnel</u>
Location Found:	<u>Room A Site #1</u>

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US EPA CID
National Computer Forensics Laboratory
Report of Acquisition

Make and Model: Dell Optiplex GX620
System Serial No.: FTM4NB1
Forensic Image Description: Physical image of hard drive

System #4
Primary Known User or Purpose: Room A Sample Login PC6
Location Found: ELI Sample Login Personnel
Make and Model: Room A Site #1
System Serial No.: Dell Optiplex GX620
Forensic Image Description: 9QR0C81
Physical image of hard drive

System #5
Primary Known User or Purpose: Room A Sample Login PC7
Location Found: ELI Sample Login Personnel
Make and Model: Room A Site #1
System Serial No.: Dell Optiplex GX620
Forensic Image Description: 9WQX6D1
Physical image of hard drive

System #6
Primary Known User or Purpose: Room A Sample Login PC8
Location Found: ELI Sample Login Personnel
Make and Model: Room A Site #1
System Serial No.: Dell Optiplex GX620
Forensic Image Description: HCC1041
Physical image of hard drive

System #7
Primary Known User or Purpose: Room A Sample Login PC9
Location Found: ELI Sample Login Personnel
Make and Model: Room A Site #1
System Serial No.: Dell Optiplex GX620
Forensic Image Description: 3SMQY71
Physical image of hard drive

System #8
Primary Known User or Purpose: Room F PC13
Location Found: Room F Site #1
Make and Model: Dell Optiplex 240
System Serial No.: 542BR11
Forensic Image Description: Physical image of hard drive

System #9
Primary Known User or Purpose: Room L PC11
Location Found: Room L Site #1
Make and Model: Dell Optiplex GX620
System Serial No.: D586VB1
Forensic Image Description: Physical image of hard drive

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US EPA CID
National Computer Forensics Laboratory
Report of Acquisition

System #10
Primary Known User or Purpose: [REDACTED]
Location Found: Room M Site #1
Make and Model: Dell Optiplex GX620
System Serial No.: 3X2K9B1
Forensic Image Description: Physical image of hard drive

System #11
Primary Known User or Purpose: [REDACTED]
Location Found: Room N Site 1
Make and Model: Dell Optiplex GX620
System Serial No.: 3VM4NB1
Forensic Image Description: Physical image of hard drive

System #12
Primary Known User or Purpose: Cheryl Garling
Location Found: Room Q Site #1
Make and Model: Dell Optiplex 740
System Serial No.: Q2828F3P
Forensic Image Description: Physical image of hard drive

*ENERGY DIRECT USE
WORKSTATION*

System #13
Primary Known User or Purpose: [REDACTED]
Location Found: Room X Site #1
Make and Model: Dell Optiplex 740
System Serial No.: 37LZWC1
Forensic Image Description: Physical image of hard drive

System #14
Primary Known User or Purpose: [REDACTED]
Location Found: Room AG Site #1
Make and Model: Hard Drive Found in External USB Case
System Serial No.: N/A
Forensic Image Description: Physical image of hard drive

System #15
Primary Known User or Purpose: Cheryl Garling
Location Found: Room AS Conference Room Site #1
Make and Model: Dell Latitude D810
System Serial No.: D3LV791
Forensic Image Description: Physical image of hard drive

System #16
Primary Known User or Purpose: [REDACTED] PC3

*OMEGA ONE, CASPER 2 LAG
INFORMATION MANAGEMENT
SYSTEM, TEMPERATURE
MONITORING SYSTEM.*



US EPA CID
National Computer Forensics Laboratory
Report of Acquisition

Location Found: Trailer Adjacent to Main Building @ Site #1
Make and Model: Dell Optiplex 740
System Serial No.: D3NR5PC1
Forensic Image Description: Physical image of hard drive

Site #2

System #1
Primary Known User or Purpose: RmA-PC1
Location Found: Radiological Lab PC
Make and Model: Room A Site #2
Forensic Image Description: Dell
Physical image of hard drive

*DATA ENTRY,
STAGE SAMPLES*

System #2
Primary Known User or Purpose: RmB-PC1
Location Found: Radiological Lab PC
Make and Model: Room B Site #2
System Serial No.: Dell Optiplex GX 260
Forensic Image Description: CM6BG21
Physical image of hard drive

System #3
Primary Known User or Purpose: RmB-PC2
Location Found: Radiological Lab PC
Make and Model: Room B Site #2
System Serial No.: Dell Optiplex 740
Forensic Image Description: HDWVC1 (Service Tag)
Physical image of hard drive

System #4
Primary Known User or Purpose: RmC-PC2
Location Found: Radiological Lab PC
Make and Model: Room C Site #2
System Serial No.: Dell Optiplex GX620
Forensic Image Description: 78MQY71
Physical image of hard drive

System #5
Primary Known User or Purpose: RmC-PC3
Location Found: Radiological Lab PC
Make and Model: Room C Site #2
System Serial No.: Dell Optiplex 740
Forensic Image Description: 57LZWC1
Physical image of hard drive

System #6
Primary Known User or Purpose: RmD-PC1
Location Found: Radiological Lab PC
Make and Model: Room CD Site #2
Forensic Image Description: Dell Optiplex GX260
Physical image of hard drive

*EVERY ONE GET ONE,
RADIO CHELL
DATABASE*

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National Computer Forensics Laboratory
Report of Acquisition

System #7
Primary Known User or Purpose: RmD-PC2
Location Found: Radiological Lab PC
Make and Model: Room D Site #2
System Serial No.: Dell Dimension XPS B866
Forensic Image Description: FJ5M501
Physical image of hard drive

System #8
Primary Known User or Purpose: RmD-PC3
Location Found: Radiological Lab PC
Make and Model: Room D Site #2
System Serial No.: Dell Optiplex GX260
Forensic Image Description: 8J23F21
Physical image of hard drive

System #9
Primary Known User or Purpose: RmE-PC1
Location Found: Radiological Lab PC
Make and Model: Room E Site #2
System Serial No.: Dell Optiplex SX280
Forensic Image Description: DD4DJ71
Physical image of hard drive

System #10
Primary Known User or Purpose: RmE-PC2
Location Found: Radiological Lab PC
Make and Model: Room E Site #2
System Serial No.: Dell Optiplex 740
Forensic Image Description: BFWVC1
Physical image of hard drive

System #11
Primary Known User or Purpose: RmE-PC3
Location Found: Radiological Lab PC
Make and Model: Room E Site #2
System Serial No.: Dell Optiplex GX750
Forensic Image Description: 5295T01
Physical image of hard drive

System #12
Primary Known User or Purpose: RmE-PC4
Location Found: Radiological Lab PC
Make and Model: Room E Site #2
System Serial No.: Dell Dimension
Forensic Image Description: FK8SC01
Physical image of hard drive

System #13
Primary Known User or Purpose: RmE-PC5
Location Found: Radiological Lab PC
Make and Model: Room E Site #2
System Serial No.: Dell
HQPHEF1 (Service Tag)

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National Computer Forensics Laboratory
Report of Acquisition

Forensic Image Description	Physical image of hard drive
System #14	<u>RmE-PC6</u>
Primary Known User or Purpose:	<u>Radiological Lab PC</u>
Location Found:	<u>Room E Site #2</u>
Make and Model:	<u>Generic</u>
System Serial No.:	<u>None</u>
Forensic Image Description	Physical image of hard drive
System #15	<u>RmE-PC8</u>
Primary Known User or Purpose:	<u>Radiological Lab PC</u>
Location Found:	<u>Room E Site #2</u>
Make and Model:	<u>Dell Optiplex 740</u>
System Serial No.:	<u>7NR5PC1</u>
Forensic Image Description	Physical image of hard drive
System #16	<u>RmE-PC9</u>
Primary Known User or Purpose:	<u>Radiological Lab PC</u>
Location Found:	<u>Room E Site #2</u>
Make and Model:	<u>Dell Dimension 3100</u>
System Serial No.:	<u>8TN24B1 (Service Tag)</u>
Forensic Image Description	Physical image of hard drive
System #17	<u>RmE-PC10</u>
Primary Known User or Purpose:	<u>Radiological Lab PC</u>
Location Found:	<u>Room E Site #2</u>
Make and Model:	<u>Generic</u>
System Serial No.:	<u>None</u>
Forensic Image Description	Physical image of hard drive
System #18	<u>RmE-PC11</u>
Primary Known User or Purpose:	<u>Radiological Lab PC</u>
Location Found:	<u>Room E Site #2</u>
Make and Model:	<u>Generic (P-120)</u>
System Serial No.:	<u>CC961655</u>
Forensic Image Description	Physical image of hard drive
System #19	<u>RmE-PC12</u>
Primary Known User or Purpose:	<u>Radiological Lab PC</u>
Location Found:	<u>Room E Site #2</u>
Make and Model:	<u>SpaceWalker</u>
System Serial No.:	<u>None</u>
Forensic Image Description	Physical image of hard drive
System #20	<u>RmE-PC13</u>
Primary Known User or Purpose:	<u>Radiological Lab PC</u>
Location Found:	<u>Room E Site #2</u>

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Report of Acquisition

Make and Model: EM PAC (Generic)
System Serial No.: EI422729
Forensic Image Description: Physical image of hard drive

System #21 RmE-PC14
Primary Known User or Purpose: Radiological Lab PC
Location Found: Room E Site #2
Make and Model: Dell
System Serial No.: JQPHFD1 (Service Tag)
Forensic Image Description: Physical image of hard drive

*Gamma Center
w/ Data Being
Janned locally.*

Forensic Acquisition/Analysis: All computers were imaged at Energy Labs Inc. on October 30th, 2007. All images/logical copies were acquired either via the use of EnCase Examiner forensic software (and accordingly are in the EnCase image format, i.e. *.E01 files), via Voom Technologies, HardCopy II hard drive imaging device or via logical copy. Those raw images acquired with the HardCopy II were subsequently reacquired at the NCFL and converted to the EnCase *.E01 format. Images have been stored as evidence at the NCFL pending analysis.

The Western Digital 750GB hard drive (SN: 3QD0692T) accompanying this report contains:

1. Specified backups and logical copies of files obtained from Site #1 and,
2. All forensic images obtained at Site #2.

The drive contains the folders and subfolders shown below:

Folder Name: Energy Labs Inc. Site #1

Subfolder: Backups (lab data backup files from Main File Server)
Subfolder: Organic Server Logical Files
Logical File: Organic Server Logical Files.zip

Folder Name: Energy Labs Inc. Site #2

Subfolder: Room A PC 1
Subfolder: Room B PC 1
Subfolder: Room B PC 2
Subfolder: Room C PC 2
Subfolder: Room C PC 3
Subfolder: Room D PC 1
Subfolder: Room D PC 2
Subfolder: Room D PC 3
Subfolder: Room E PC 1
Subfolder: Room E PC 10 Middle
Subfolder: Room E PC 10 Top
Subfolder: Room E PC 11
Subfolder: Room E PC 12
Subfolder: Room E PC 12 Drv 2
Subfolder: Room E PC 13
Subfolder: Room E PC 14
Subfolder: Room E PC 2

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US EPA CID
National Computer Forensics Laboratory
Report of Acquisition

Subfolder: Room E PC 3
Subfolder: Room E PC 4
Subfolder: Room E PC 5
Subfolder: Room E PC 6
Subfolder: Room E PC 8
Subfolder: Room E PC 9
Subfolder: Voom HDR Files

These images are being transferred to the NEIC Information Technology Branch for analysis of all lab-related data.

Requested NEIC analysis should focus on:

- 1) Data generated from lab instruments,
- 2) Documents and files (i.e. Word processor documents and/or spreadsheets, graphics or similar files) containing lab-related reports/data.

NCFL analysis will focus on:

- 1) Documents and files containing non-lab data such as business-related Word processor files, spreadsheets, communications and similar files.

Status: Pending completion of analysis of seized media by NEIC and the NCFL.

Disposition of Duplicate Original Evidence: On January 14th, 2007 the Western Digital hard drive containing all duplicate original evidence specified above was sent to NEIC via FEDEX (Tracking No# 799781331818).

Distribution

Original Report: SA [REDACTED], Denver Area Office

Copy: [REDACTED], Computer Specialist, Information Technology Branch, NEIC, Denver, CO

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My notes from last week, with a few additions

to:

Cc:

11/08/2010 10:36 AM



US EPA National Air and Radiation Environmental Laboratory
Phone: [REDACTED]
Fax: (334) 270-3454

Requested PC information

- A full directory listing, or at least a directory tree, from each drive
- All Access databases (*.mdb), especially g5000w.mdb (from the Gamma Products machine)
- All Excel spreadsheets (*.xls) – These may have been used to calculate their results.
- Berthold 770 sample data files (*.sdt) – Sample data seem to be in *.sdt, backgrounds in *.bdt, and efficiency checks in *.fdt. We care most about the SDT files. These may be text or binary. If they are binary, we'll need information from the instrument manufacturer to decode them.
- Packard 3100TR data files (all files in a "Packard" folder or its subfolders) – These will be most useful to us if they have numerical extensions, e.g., *.001, *.002, ..., indicating that there was one data file per batch of samples analyzed. (These files contain human-readable text.)
- Perhaps all PDF files (*.pdf). Reports to clients may have been scanned and saved in PDF format. Graphic formats (e.g., JPEG) are another possibility.

Notes and observations

- ELI almost always met the RDL (required detection limit) for ^{226}Ra . It almost always failed to meet the RDL for ^{228}Ra .
- When a client specifically requested a DL of 0.5 pCi/L, ELI knew how to reach it – by analyzing more sample and counting longer. So, incompetence isn't the explanation for their failure to meet the 1.0 pCi/L DL at other times. They knew what their DL was and they kept doing the same thing anyway.
- Given a gross alpha spreadsheet similar to the spreadsheets for ^{226}Ra and ^{228}Ra , I could calculate DLs for that analysis too. However, we know they were counting these samples for 720 min, apparently trying to reach the RDL.
- The ^{228}Ra ingrowth times (for ingrowth of ^{228}Ac from ^{228}Ra) were often less than the traditional 36 h. It appears they were cutting corners. The analysis determines ^{228}Ra activity by measuring the decay product ^{228}Ac , which is easier to measure than ^{228}Ra . The half-life of ^{228}Ac is 6.15 h, which means that after 6.15 h of ingrowth, the ^{228}Ac is half of the ^{228}Ra activity; after 12.3 h the ^{228}Ac is ~75 % of the ^{228}Ra ; after 18.45 h the ^{228}Ac is ~87.5 % of the ^{228}Ra activity, etc. So, there are diminishing returns after a while. After 18.5 hours, you're within 12.5 % of the maximum possible ingrowth factor.
- There are some anomalies in the ^{226}Ra spreadsheets. From time to time the count times were unusually short and variable, while the gross count rates and calculated activities were high and variable. But when you multiply the gross count rate and the count time, you get almost the same total number of counts each time (~3000). That just isn't plausible. Statistically, it's almost impossible. I can't imagine a motive for anyone deliberately faking these results. Either a software bug or a recurring user error seems more likely, but it begs for follow-up.
- There were some short count times in the ^{228}Ra spreadsheet, but these looked more realistic, and the total gross counts weren't suspiciously consistent.
- The ELI LIMS database contains a huge amount of useful information, and you can browse it easily using Microsoft Access.
- To prove the more serious charges, we need not only the LIMS data but also raw (or almost raw) data from the instruments. We also need copies of reports to clients.
- [REDACTED] e-mail dated April 18, 2007, says the lab was getting biased results for gross alpha from the "Tennelec" and that by this time they were using only the Gamma Products counter for gross alpha. If they fudged gross alpha results, they probably did it more often when they were using one of the Tennelec counters.
- If we had old backup copies of the LIMS database, it would be easy to write a program to compare old records to newer versions to look for unexplained changes. This might not reveal anything significant, because the changes might have been made soon after the analyses were completed, before the original records were backed up. But it would still be easy to do and might be worth the time.
- The Gamma Products software saves all raw data in a Microsoft Access database. At our lab the database is named G5000W.MDB.

- ELI had three "Tennelec" counters, and each printed results in a different format. They must have been different models. When we had Tennelec counters at my lab (models from the late 1980s), they did not save data at all. They only printed it. I don't know about the models used at ELI.
- The Packard 3100TR (used at ELI for tritium, ^{210}Pb , and radon analysis) can be set up to save data in CSV files, either overwriting the same file each time, or creating a new file for each batch using an auto-incrementing number for the file extension. Or it can be set up to print without saving anything. Let's hope they saved each batch of data in a new file.
- As far as I can tell, the backgrounds used for background correction of sample results came from analysis of a "reagent blank" in each batch, which means the background count time is always the same as the sample count time. The short daily "backgrounds" were just contamination checks for QC purposes. In a few cases, I saw that the count rate used for background (blank) correction was the same as the reagent blank cpm, but in other cases it wasn't the same.

The term "detection limit" means different things to different people. In the drinking water regulations, it has a specific definition for radiochemical analyses, which ELI was clearly aware of. It is defined to be the activity concentration that can be measured with a relative standard deviation of 1/1.96 (or 51 %) (counting statistics only). It's an odd definition, but it comes from the notion that a 95 % confidence interval for the result is given by $x \pm 1.96\sigma$, where x is the measured result and σ is the (estimated) standard deviation of the measurement. If the lab measures a result x such that $x > 1.96\sigma$, then it appears very likely that the true activity concentration is greater than zero.

With a few assumptions one can derive an expression for the net count rate R_D that gives you this detection limit.

$$R_D = \frac{1.96^2}{2t_s} \left[1 + \sqrt{1 + \frac{4R_B t_s}{1.96^2} \left(1 + \frac{t_s}{t_B} \right)} \right]$$

where t_s is the sample count time, t_B is the background/blank count time, and R_B is the background/blank count rate. (I showed the equation and its derivation to [REDACTED] before he went to ELI.) Since $t_s = t_B$ this equation can be simplified.

$$R_D = \frac{1.921}{t_s} \left[1 + \sqrt{1 + \frac{4R_B t_s}{1.921}} \right]$$

To get the DL for the measurement, you have to convert the count rate R_D to an activity concentration. You do this exactly the way you convert the actual measured net count rate to an activity concentration – typically by dividing it by several factors such as the sample volume, efficiency, recovery, and decay and/or ingrowth factors. If you don't have all those individual factors (as I did not in the case of the ^{228}Ra data), just use the ratio between the lab's sample result and the net count rate.



Request for information, re: ELI 0800-0497

11/22/2010 01:38 PM

Cc: [REDACTED]

[REDACTED]

I recently met with the radiochemistry expert in the ELI case. Unfortunately, from NCFL's Report of Acquisition there is no way of determine which computers, if any, contain data from the instruments in the radiochemistry lab. It is my understanding that the instruments in the lab most likely were saving data onto the lab computers. I need to determine, with certainty, if the computers contain the raw data we need for the investigation.

The NAREL expert provided the following request for information. I believe our first step should be to address his first request to obtain list of files from each computer to include the file extensions. He should be able to determine from the directory listing which computers contain the raw data we need. Once those computers are identified I can make a request to obtain a copy of the data in a format the expert can review.

Additionally, I need to review the information that ELI was scanning and storing in its Paper Vision program. It is my understanding from witness interviews that ELI was scanning the final lab results reports and then shredding the originals. That is why it is critical that I get both the raw data and the final report so the expert can track the analysis from beginning to end.

The following information has been requested by the radiochemistry expert:

- A full directory listing, or at least a directory tree, from each drive
- All Access databases (*.mdb), especially g5000w.mdb (from the Gamma Products machine)
- All Excel spreadsheets (*.xls) – These may have been used to calculate their results.
- Berthold 770 sample data files (*.sdt) – Sample data seem to be in *.sdt, backgrounds in *.bdt, and efficiency checks in *.fdt. We care most about the SDT files. These may be text or binary. If they are binary, we'll need information from the instrument manufacturer to decode them.
- Packard 3100TR data files (all files in a "Packard" folder or its subfolders) – These will be most useful to us if they have numerical extensions, e.g., *.001, *.002, ..., indicating that there was one data file per batch of samples analyzed. (These files contain human-readable text.)
- Perhaps all PDF files (*.pdf). Reports to clients may have been scanned and saved in PDF format. Graphic formats (e.g., JPEG) are another possibility.

Please call or write with any questions you may have.

Thank you,

[REDACTED]

Special Agent

EPA CID

[REDACTED] - Office

[REDACTED] - Cell

U.S. EPA CID

1595 Wynkoop Street

Mail Code: 8CID

Denver, CO 80202-1129

[REDACTED] - Main

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ELI

to:

12/08/2010 05:12 PM

Cc:

Show Details

I've FedEx'ed my response to your latest request for further data from the ELI images . You'll be getting it tomorrow.

In your email to [REDACTED] on 11/22/10 you mentioned you "might" want all PDF files. There are many of them as you can imagine and they're currently being segregated from all the images but won't be available for me to send to you until next week.

The hard drive you'll be receiving tomorrow contains the following from all lab PCs:

All Berthold 770 files (SDT, BDT, FDT).

All Microsoft Access files (MDB, MDE).

All Excel spreadsheet files (XLS).

A directory listing of all files on every computer we imaged in the ELI lab (Site 2).

Email which contained the words "report" or 3100TR" in the subject line.

After your radiochemistry expert reviews the data perhaps we can talk, or advise me via email, ref further information regarding the pertinent Packard 3100TR files.

They have not yet been processed. I'd like the expert to provide further information regarding their location on each PC so you don't get a lot of irrelevant files with similar extensions.

[REDACTED]
Senior Program Specialist
US Fish & Wildlife Service
Digital Evidence Recovery / Technical Support Unit
701 San Marco Blvd., (Suite 7W)
Jacksonville, Florida 32207

[REDACTED] (Desk)

[REDACTED] (Cell)

[REDACTED]@FWS.gov

From: [REDACTED]/MTG/USEPA/US
To: [REDACTED]/CID/R8/USEPA/US@EPA

Date: Thursday, December 23, 2010 11:24AM
Subject: Re: Hard drive

I tried calling the Oak Ridge number, but they're closed till Monday.

[REDACTED]
US EPA National Air and Radiation Environmental Laboratory
Phone: [REDACTED]
Fax: (334) 270-3454

[REDACTED] --2010-12-23 11:59:38---Thank you for the update. Will you be reaching out to the instrument manufacturers to obtain the inf

From: [REDACTED]/CID/R8/USEPA/US
To: [REDACTED]/MTG/USEPA/US@EPA
Date: 2010-12-23 11:59
Subject: Re: Hard drive

Thank you for the update.

Will you be reaching out to the instrument manufacturers to obtain the information you need or is that something you need me to do?

Thanks again and happy holidays.

Alina

[REDACTED]
Special Agent
EPA CID

[REDACTED] - Office
[REDACTED] - Cell

U.S. EPA CID
1595 Wynkoop Street
Mail Code: 8CID

Denver, CO 80202-1129

[REDACTED] - Main

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[REDACTED] ---12/23/2010 10:55:46 AM---The hard drive arrived today. The MDB files do include raw data from the Gamma Products instruments,

From: [REDACTED]/MTG/USEPA/US

To: [REDACTED]/CID/R8/USEPA/US@EPA

Date: 12/23/2010 10:55 AM

Subject:Hard drive

The hard drive arrived today. The MDB files do include raw data from the Gamma Products instruments, as expected.

The SDT, BDT, and FDT files are binary, as I feared. We'll need information from the instrument manufacturer to read them.

No PDFs yet, as you know. I haven't searched through the directory yet to see what PDFs might be available.

[REDACTED]
US EPA National Air and Radiation Environmental Laboratory
Phone: [REDACTED]
Fax: (334) 270-3454

United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report

Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

0800-0497 Report of Analysis Final 020711

Activity Date:

March 9, 2011

Reporting Official and Date:

[REDACTED], SA

10-MAR-2011, Signed by: [REDACTED], SA

Approving Official and Date:

[REDACTED], SAC

10-MAR-2011, Approved by: [REDACTED], ASAC

SYNOPSIS

The forensic analysis of the seized computer data has been completed. Files of potential evidentiary value are being forwarded to SA [REDACTED], Denver Area Office.

DETAILS

Further details are contained in the attached Report of Analysis. The analysis disk has been forwarded via separate cover for review.

ATTACHMENT

0800-0497 Report of Analysis Final 020711

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US EPA CID
National Computer Forensics Laboratory (NCFL)
Report of Analysis

Case Title / Number: Energy Labs Inc. / 0800-0497 / F08-08

Date: March 7, 2011

To: SA [REDACTED] Denver Area Office

From: SA [REDACTED], NCFL

Subject: Report of Analysis per Request of 2/7/2011

Supervisor Approval: ASAC [REDACTED] NCFL [REDACTED]

Details: The forensic analysis of the seized computer data has been completed. Files of potential evidentiary value are being forwarded to SA [REDACTED] Denver Area Office.

Authorization for Analysis: On or about October 30, 2007, SA [REDACTED] Denver Area Office, obtained a federal search warrant for the office of Energy Labs Inc. (ELI), located in Casper, WY and provides the authority for the analysis of the seized computer data.

Forensic Acquisition and Analysis: Reference is made to the previous NCFL Reports by SA C. D. [REDACTED] and SA [REDACTED] NCFL, dated January 9, 2008, March 16, 2008, February 5, 2009, and February 19, 2009. Analysis of the forensic images was conducted at the NCFL from a new request from SA [REDACTED] on February 7, 2011 between February 21, 2011 and February 28, 2011. The results of that analysis are documented below.

Analysis of Logical Files: Logical files on all the computer images were forensically examined. Logical files contained on a computer hard disk are normally accessed through what is referred to as the file system. Active or logical files are files that are listed in the normal directory view. That is, active/logical files can be listed from a DOS prompt with the dir command or listed by opening a Windows Explorer directory or other File Manager program. Logical data files such as spreadsheets, PDFs, graphics, documents, and emails found on the media examined were reviewed for potential evidentiary content.

At the request of the case agent, the search was limited to files containing "laboratory analytical results." Those files determined to be potentially relevant based on parameters provided by SA [REDACTED] were placed into folder entitled "PDF" onto the Results DVD.

NOTE: The files obtained from the forensic images were converted into Portable Document Format (PDF) and IPro load format files for review by the case agent. All results were screened for malware.

Status: This is a final report and no further analysis is planned. Additional information may be available on files included on the Results CD. Possible information may include but is not limited to: file properties, file "owner", source / origin of the file, duplicate occurrence of file(s), file revisions, metadata (i.e. embedded file data which may reveal a documents title, subject, authorship, edits and other information). If additional information on any file(s) included on the Results CD is necessary to further the investigation or if the search criteria changes as a result of this analysis or other investigative efforts, please contact the NCFL as soon as possible.

LAW ENFORCEMENT SENSITIVE

This report contains the results of forensic analysis conducted on seized or submitted electronic evidence and remains the property of the EPA. Third party distribution is prohibited without the prior permission of the EPA. (Rev. 16AUG06)



US EPA CID
National Computer Forensics Laboratory (NCFL)
Report of Analysis

Disposition of Original Evidence: Only duplicate original media (i.e. forensic images) of the subject's electronic media were seized into evidence per the search warrant. The NCFL has retained an archival copy of these images.

At the conclusion of case, notify the NCFL examiner so that NCFL archival evidence can be disposed of in accordance with the OCEFT Manual.

ATTACHMENT(S)

Results DVD (2 Copies, forwarded under separate cover to Case Agent)

DISTRIBUTION

Report Copy and Attachments: SA [REDACTED] Denver Area Office

LAW ENFORCEMENT SENSITIVE

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**United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report**

Case Number

0800-0497

Case Title:

Energy Laboratories, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Receipt and Review of Results DVD from NCFL

Activity Date:

March 16, 2011

Reporting Official and Date:

██████████, SA
30-MAR-2011. Signed by: ██████████, SA

Approving Official and Date:

██████████, SAC
30-MAR-2011. Approved by: ██████████, ASAC

SYNOPSIS

Receipt and review of results DVD received from the National Computer Forensics Laboratory (NCFL). The results were in response to a request made by S/A ██████████ on February 7, 2011, for electronic copies of Energy Laboratories, Inc. (ELI) lab result reports for radiochemical analysis.

DETAILS

On February 7, 2011, S/A ██████████, EPA CID, e-mailed a request to the NCFL on the ELI case. Specifically, S/A ██████████ requested NCFL extract all final lab result reports generated by ELI's radiochemistry laboratory from the forensically seized computer data. A copy of the e-mail request is attached.

On February 17, 2011, S/A ██████████ e-mailed a few sample lab reports to S/A ██████████, NCFL, to facilitate the search for the radiochemistry lab reports.

On March 10, 2011, S/A ██████████ opened a United Parcel Service package containing a Report of Analysis dated March 7, 2011 and two (2) DVD's labeled, "Denver Area Office, ELI Case, 0800-0497, Results of 02/07/2011 Request, Results DVD, Agent Copy." The DVD's will be stored in the Denver Area Office's evidence storage room for safekeeping. Attached is a copy of the Chain of Custody (COC-10).

On March 14, 2011, S/A ██████████ conducted a preliminary review of the results DVD received from the NCFL. In reviewing the DVD, S/A ██████████ became aware that the search for lab reports from the radiochemistry laboratory was unsuccessful. The documents on the DVD were not the documents requested.

On March 16, 2011, S/A ██████████ spoke with S/A ██████████ telephonically to discuss the results DVD. S/A ██████████ advised he used the list of parameters as we discussed and the results on the DVD were the results of that search. S/A ██████████ indicated he conducted an extensive search to come up with the information contained in the results DVD. S/A ██████████ advised that witnesses stated ELI would scan the final lab reports into a software program called PaperVision and would then shred the original report and supporting documentation. The EPA radiological expert assisting in the data review needs the final lab reports in order to complete his analysis of the data. S/A ██████████ suggested S/A ██████████ speak to ██████████ and ██████████, Computer Forensic Technicians at the National Enforcement Investigation Center and ask if the data needed was somehow uploaded into ELI's laboratory information management system (LIMS).

ATTACHMENT

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**United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report**

Case Number

0800-0497

1. E-mail to NCFL Requesting Final Lab Reports for the Radiochemistry Lab
2. NCFL Report of Analysis for 2/7/2011 Request
3. Chain of Custody COC-10 for Results DVD (re: 2/7/2011 request)

This document contains neither recommendations nor conclusions of the EPA.
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Re: Final lab result reports for ELI

02/07/2011 07:43 AM

to: [REDACTED]
Cc: [REDACTED]

History: This message has been forwarded.

[REDACTED]

[REDACTED] is out of the office through the end of February. However, [REDACTED] saw your email and came by the office this weekend to look at the evidence and said that it would be quite involved to recover the files you're looking for. [REDACTED] best estimate for him to get you what you need, given his travel schedule, is four to six weeks, so I've asked [REDACTED] to handle your request. [REDACTED] has another couple of priority assignments and an upcoming search warrant in two weeks, but his turn-around should still be faster than waiting for [REDACTED] to return. [REDACTED] will contact you and/or [REDACTED] if [REDACTED] has any questions.

Regards,

[REDACTED], ASAC
National Computer Forensics Lab & Technical Investigative Equipment Support Center
Criminal Investigation Division
US Environmental Protection Agency
701 San Marco Blvd., Suite 7-West
Jacksonville, FL 32207

[REDACTED]@epa.gov

[REDACTED] Voice

904-899-5221 Fax

[REDACTED]/CID/R8/USEPA/US wrote: -----

To: [REDACTED]/R4/USEPA/US@EPA, [REDACTED]/R3/USEPA/US@EPA
From: [REDACTED]/CID/R8/USEPA/US
Date: 02/04/2011 05:07PM
Cc: [REDACTED]s@fws.gov
Subject: Final lab result reports for ELI

[REDACTED]

Hi [REDACTED]. I hope my e-mail finds you well.

I need to extract all final lab result reports generated by ELI's Radiochemistry lab from the electronically seized evidence. These would be the final reports that were sent to the clients. Witnesses told me that ELI went to scanning and shredding their original documents in 2006 and was using PaperVision software to maintain the records. I need to get the information to the RAD experts ASAP so they can conduct their full data review.

Because I do not understand the technical side of the seizure process I am not how to suggest it be done. Can the documents under the PaperVision software be extracted in .pdf format using the I-Capture software? Let me know what your thoughts are as soon as you can. My statute of limitations is coming up in 2012 and we are trying to finalize the review with the experts.

Thank you!

[REDACTED]